'Epistemic fit' and the mobilisation of management knowledge in health care.

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‘EPISTEMIC FIT’ AND THE MOBILISATION OF MANAGEMENT KNOWLEDGE IN HEALTH CARE

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ABSTRACT

We discuss the mobilisation of management knowledge in health care, drawing on six qualitative case studies in a diverse range of health care settings. Drawing on theory about management knowledge and practices’ ‘fit’, and emergent theory about ‘epistemic stances’, we explain how cultural/institutional, political and epistemic fit and clashes between the norms, interests and epistemic stances of different communities affected knowledge mobilisation in these settings. We also highlight the key role of knowledge brokers in ‘fitting’ knowledge within contexts as part of their own identity work. Yet we note that knowledge brokers’ ability to mobilise and fit knowledge depended on having a senior role or senior level support, and credibility/legitimacy with dominant communities. We suggest that our novel concepts of ‘epistemic fit’ and ‘fitting’ are useful in explaining the process of knowledge mobilisation, particularly in complex pluralistic health care contexts containing multiple epistemic communities which produce, use and value knowledge in different ways.

INTRODUCTION

What kinds of management knowledge are mobilised in health care, how does this happen, what supports and what inhibits this process? The traditional perspective on the diffusion and adoption of management knowledge, innovations and practices is that they happen for rational reasons, related to their technical efficiency and advantages compared with alternatives. However, rational accounts may overlook the way innovation and diffusion happens *in practice*, often revealing more variation at organisational level, affected by a wider range of factors (Ansari et al., 2010, Sturdy, 2004).

The concept of 'evidence-based management' (EBMgt) draws on a rational perspective, advocating using the best and most appropriate management practices, as established through rational review and evaluation of knowledge, research and evidence. EBMgt is modelled on evidence-based medicine, which is viewed as legitimate and widely practised in health care. Health care therefore provides an important context in which to examine EBMgt, (Rousseau et al., 2008, Walshe and Rundall, 2001).

Yet a rational process may not be wholly followed, even in evidence based medicine. For instance, clinicians have been found to evaluate new clinical evidence by drawing on 'mindlines', i.e. internalised tacit guidelines, influenced by the opinions of their professional communities, rather than rational assessment of evidence (Gabbay and Le May, 2004). Furthermore, management is more subjective and contextually situated than clinical science, which is something the EBMgt movement has been critiqued for overlooking (Ardnt and Bigelow, 2009). This may explain why, in the limited research on the implementation of EBMgt in health care, few instances of 'gold standard' EBMgt have been found in practice (Reay et al., 2009). A broader perspective on the adoption and diffusion of management innovation, knowledge and practices may be required to explain why this is so.

We draw on a recent research project (Dopson et al., 2013) examining (general and 'hybrid' clinical) managers' use of management knowledge, research and evidence, including the potential use of evidence-based management (EBMgt), in six diverse health care settings. Based on our empirical findings, and building on the work of Ansari and colleagues (2010), we suggest that a key factor affecting knowledge mobilisation is the 'fit' between knowledge and the contexts in which it is mobilised.

The health care organisational context contains multiple professional communities with different 'epistemic stances' (Chakravartty, 2011, Fayard et al., 2015) in relation to what constitutes valid knowledge (Ferlie et al., 2005, McGivern and Dopson, 2010), and often affected by wider 'epistemic cultures' (Knorr-Cetina, 1999). Accordingly, we draw attention to one aspect of fit, 'epistemic fit', which we suggest is particularly important in health care but has so far been largely overlooked in this setting. We explain the importance of 'epistemic fit' with the prevailing epistemic stances of key communities within the knowledge mobilisation process, and highlight the important work of 'knowledge brokers' (Dopson and Fitzgerald, 2006, Lomas, 2007) in developing epistemic fit with the health care context.

In the following section, we review literature on the adoption, diffusion and 'fit' of management knowledge, innovation and practices and then theory about epistemic cultures, epistemic stances, epistemic communities and boundaries and finally knowledge brokers. Next we outline the qualitative research methods used to collect and analyse data discussed in this chapter, and then provide a brief overview of the six case studies we analysed; an independent charitable trust providing specialist clinical services; an Academic Health Sciences Centre; a NHS Primary Care Trust; a management consultancy project in the NHS; a health care policy 'think tank'; and a Collaboration for Leadership in Applied Health Research and Care.

We then discuss our findings, first in relation to influences on managers' use of management knowledge in general and then as demonstrated in the six case studies. Finally we explain our theoretical stance relating to 'fit' and 'epistemic fit' and how knowledge brokers engage in 'fitting' knowledge with its context.

THE DIFFUSION, ADOPTION AND 'FIT' OF MANAGEMENT KNOWLEDGE

Sturdy (2004) contrasts the rational view of the adoption and diffusion of management knowledge ideas and practices with alternatives, including political (relating to power, conflict and interests), cultural (relating to prevailing cultures and norms) and institutional (affected by notions of and the search for legitimacy) views. Social, cultural and institutional accounts explain how the adoption or diffusion of management knowledge and practices may depend on their social legitimacy and whether they conform to group norms, pressures and normative cultural pressures. Political accounts show how power, politics and the interests of those involved affect the process (Sturdy, 2004, Ansari et al., 2010). Knowledge is 'at stake', inscribed with the interests of its creators (Carlile, 2004), who need to maintain their credibility within their wider communities (McGivern and Dopson, 2010), so actors are therefore likely to mobilise knowledge reflecting their interests and resist knowledge that goes against them (Sturdy, 2004, Ansari et al., 2010).

Ansari and colleagues (2010) argue that the 'extensiveness' and 'fidelity' of the diffusion and adoption of management practices depends on their 'fit' with wider rational, cultural, and political contexts. *Rational fit* relates to practices being seen as more technically or rationally efficient or useful than alternative practices in particular contexts. *Cultural fit* relates to

practices conforming to legitimate social, institutional, cultural and group norms. *Political fit* relates to practices reflecting prevailing power dynamics and political interests. Accordingly, depending on their technical, cultural or political fit, management practices may be extensively or narrowly diffused in ways that closely or loosely resemble their original form.

Indeed practices, knowledge and evidence often require customisation and 'tailored adaptation' (Ansari et al., 2010) to make them meaningful and suitable within specific organizational contexts (Robertson et al., 1996, Dopson and Fitzgerald, 2006). Managers have been found to implement management knowledge in ways that suit their own purposes and only narrowly resemble the original ideas they were based on (Zbaracki, 1998). However, Gkeredakis and colleagues (2011) suggest that variations in the implementation of management knowledge are more commonly due to the creativity and workarounds necessary to make knowledge fit local circumstances, be practically intelligible, and workable.

Accordingly, knowledge mobilisation in health care often relies upon 'knowledge brokers' (Dopson and Fitzgerald, 2006, Lomas, 2007) who are able to make appropriate adaptations because they understand the communities involved (McGivern and Dopson, 2010, Currie et al., 2014, Martin et al., 2011). In health care, such knowledge brokers may frequently be 'hybrid' clinical-managers, with a clinical background working in a managerial role. Hybrid managers have been found to play a key role in mobilising managerial knowledge and practices into health care contexts, often doing so as part of 'identity work', aligning their personal identity, profession and organisational contexts (Ferlie et al., 2013, McGivern et al., 2015, Fischer et al., 2015). 'Identity work' is work forming, repairing, maintaining, strengthening or revising constructions that produce a coherent and distinctive sense of self, which is particularly necessary during transitions and disruptions that change actors' relations with profession or organisational context (Sveningsson and Alvesson, 2003).

Health care contains a range of 'epistemic cultures' (Knorr-Cetina, 1999: 1), defined as 'amalgams of arrangements and mechanisms – bonded through affinity, necessity, and historical coincidence – which, in a given field, make up how we know what we know'. Knorr-Cetina (1999) sees epistemic cultures as 'creating and warranting knowledge', with 'epistemic machinery' relating to the production of knowledge.

However, there may be variations in the influence of epistemic cultures within medical science and between clinical, managerial and other communities in health care. 'Epistemic

clashes' (Albert et al., 2008, McGivern and Dopson, 2010) and impermeable boundaries between epistemic communities have been found to undermine knowledge mobilisation and the diffusion of innovation in health care. Examples include boundaries between various clinical professions (Ferlie et al., 2005); clinical and social scientists (Albert et al., 2008); academics, practitioners and policy-makers involved with health care (McGivern and Dopson, 2010, Swan et al., 2010); health service researchers and organisation scientists (Currie et al., 2014); and those commissioning and governing health care (Martin et al., 2011).

Chakravartty (2011) and Fayard et al (2015), both drawing on the work of Van Fraassen (2002), discuss the notion of 'epistemic stances', defined as 'a cluster of attitudes, commitments, and strategies relevant to the generation of factual beliefs… [which] determine how agents go about making claims about the world. Stances are not believed, but adopted, held, and expressed in human action' (Chakravartty, 2011: 38). Epistemic stances are enacted attitudes toward the pursuit of knowledge, reflecting onto-epistemological beliefs, affecting whether knowledge, practices and evidence are valued and considered worthwhile investigating and developing (Fayard et al., 2015).

A key difference between epistemic stances and epistemic communities relates to level of analysis. Epistemic cultures are whole fields of scientific knowledge production (like high energy physics or molecular biology), which can only be understood through extensive participation or ethnographic immersion in scientific cultures (Knorr-Cetina, 1999). Epistemic stances are more localised phenomena, which become visible in concrete situations in relation to novel problems, or the evaluation of new forms of knowledge or evidence (Fayard et al., 2015). Therefore examining epistemic stances may be useful in the studies of specific examples of knowledge mobilization in health care.

Drawing on theory about the fit of management knowledge and practices, epistemic communities, boundaries, clashes and epistemic stances, we explore six empirical case studies of management knowledge mobilisation in health care below.

RESEARCH DESIGN AND METHODS

We examined managers' use of management knowledge, research and evidence (produced by management academics, 'gurus' and consultants) in six health care settings (given pseudonyms), purposefully sampling a diverse variety of health care settings in order to study the impact on organisational contexts on this process. The organisations involved in the case study sites were:

- 'Beechwell' - a health policy 'think tank';
- 'Elmhouse' - a global management consultancy;
- 'Firgrove' - an Academic Health Sciences Centre;
- 'Mapleshire' - a Collaboration for Leadership in Applied Health Research and Care;
- 'Oakmore' - an independent charitable trust providing specialist clinical services;
- 'Willowton' - a NHS Primary Care Trust.

Our research study involved interrelated phases of data collection. First, we interviewed 45 general and 'hybrid' clinical managers across the six cases, all identified as having an interest in using management knowledge and research. Using semi-structured interview questions, developed from a review of literature on research utilisation and knowledge mobilisation (Crilly et al., (2010), we explored their motivation to seek knowledge, their search strategies, sources they drew on, how they used management knowledge and research in their day-to-day work, and how their careers influenced the way they did so.

In the second research phase, we conducted six qualitative case studies (Eisenhardt, 1989, Yin, 2003, Golden-Biddle and Locke, 2007) examining how research-based knowledge was used in the different organisational settings, focused on a knowledge 'tracer' derived from a management text and associated management theories. The six case studies involved a further 92 semi-structured interviews across the sites (making a total of 137 interviews conducted during the overall project). Interviewees were asked the same questions across the case study sites to enable comparison of findings. We collected further data through documentary analysis and observation.

Individual interview data were coded and analysed drawing on iterative qualitative methods (Miles and Huberman, 1994, Strauss and Corbin, 1998, Eisenhardt, 1989). Case studies were organised around case narratives (Golden-Biddle and Locke, 2007, Eisenhardt, 1989), with members of the wider research team working in pairs to gather and analyse data for each case. We then compared case overall narratives (Golden-Biddle and Locke, 2007, Eisenhardt,

1989) across the six cases, interrogating data based on core project research questions. New themes, including epistemic fit, emerged from the cross-site comparison. We then explored the literature reviews to see which theories explained findings, looked at new theories, and then discussed how results might extend, develop or refute pre-existing theory.

RESEARCH FINDINGS: INFLUENCES ON MANAGERS' USE OF MANAGEMENT KNOLWEDGE

During the first phase of the project we asked interviewees to complete a short survey about key influences on how they used, selected and utilised knowledge. A previous literature review (Crilly et al., 2010) suggested that managers might be influenced by personal experience, immediate communities of practice, training courses and experiences of research, management books and international management experts or 'gurus', academic research published in journals, financial pressures or remote group influences (e.g. norms in wider professional communities). The table below (taken from Dopson et al, 2013) shows how managers responded to the survey (3 indicates a strong influence and 1 a weak influence).

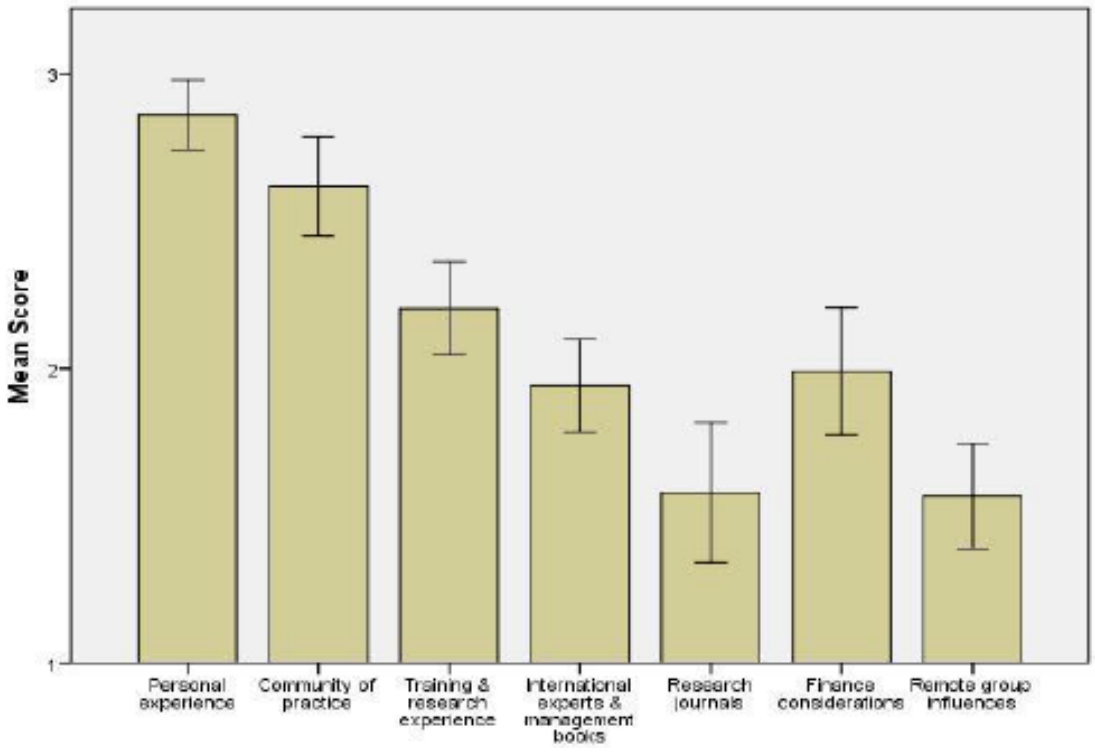

Figure 1: Influences on managers' use of research, knowledge and evidence (from Dopson et al. 2013).

These results suggest that managers were least likely to be influenced by academic management research, particularly academic management journals, and more oriented towards knowledge drawn from their own experiences, immediate (epistemic) 'communities of practice' or research-based knowledge discovered during training courses or (particularly postgraduate) academic management studies. These suggested that knowledge mobilisation is less about the *rational* evaluation of evidence and more about *personal* experience and managers' membership of particular communities.

RESEARCH FINDINGS: THE SIX CASE STUDIES OF KNOWLEDGE MOBILISATION IN HEALTH CARE

In this section we examine the evidence in our cases relating to 'fit' and 'epistemic fit' and how knowledge brokers engage in fitting knowledge with its context. The first two cases, Oakmore and Firgrove, demonstrate settings where good 'fit' and knowledge brokering enabled effective knowledge mobilisation. In the next two, Willowton and Elmhouse, knowledge mobilisation was less effective over the course of the study, with varying contextual conditions causing 'clashes' as well as 'fit'. The final cases, Beechwell and Mapleshire, are discussed in less detail, as in these examples conditions for knowledge mobilisation were unfavourable. The section ends with a summary table enabling comparison across the cases on a number of different parameters.

Oakmore: An independent charitable trust providing specialist clinical services

The most successful example of knowledge mobilisation we studied was in 'Oakmore', an independent charitable trust providing specialist clinical services. This was an interesting example of a health care provider operating outside of the NHS. While affected by wider clinical epistemic cultures, Oakmore had relatively recently introduced a number of management-orientated directors and non-executive directors at board level who encouraged the acquisition and use of new forms of knowledge and innovative thinking. Thus Oakmore's epistemic stance was 'open' to new management knowledge. We examined the implementation of the 'balanced scorecard' (Kaplan and Norton, 1993), and related Key Performance Indicators, within Oakmore.

Oakmore's CEO (and Medical Director) had a successful academic medical career but was also interested in management. The CEO can be seen as a 'willing hybrid' medical-manager, engaged in transforming clinical professional norms and health care organisations (McGivern et al., 2015). The CEO employed people with business backgrounds at senior level within Oakmore, attempting to make the organisation more 'business like' and 'blend' medical and managerial knowledge and ways of thinking.

A senior Oakmore manager had written their MBA dissertation about the balanced scorecard, which the CEO read and consequently became interested in implementing in Oakmore to focus staff on performance outcomes. The balanced scorecard fitted with the organisations' traditionally open and increasingly business-like epistemic stance and culture. Oakmore's CEO also had personal and professional credibility and the top job in the organisation, respectively providing referent and legitimate power (cf French and Raven, 1959) to drive its implementation and persuade staff of its utility for the organisation. The CEO was personally invested in using management knowledge, as part of professional identity work, and there was also a political fit between the balanced scorecard and the prevailing power, politics and interests of the CEO and other powerful actors in Oakmore.

Thus, with cultural, political and epistemic fit, the balanced scorecard required little adaptation in order to be successfully mobilised in Oakmore, though it should be noted that the CEO's earlier work in developing Oakmore's more business-like epistemic stance, and selection of and decision to implement management knowledge that fitted with it, were also essential.

Firgrove AHSC

A second case of successful knowledge mobilisation was in 'Firgrove', an Academic Health Sciences Centre (AHSC), established by a major NHS Foundation Trust, linked to a teaching hospital and associated university. The AHSC's purpose was to transform healthcare by narrowing the gap between basic and clinical science.

The tracer for this case was a strategic initiative to build a 'coaching culture' and promote 'coaching conversations' in the wider AHSC, drawing on the work of Edgar Schein (1969). Firgrove was described as having an organisational culture in which people were 'open' to collaboration and plural forms of knowledge. So while Firgrove's clinical epistemic stance

favoured rational-analytic evidence, based on hard data, it was also receptive to 'softer' qualitative forms of knowledge and actively supported multiple epistemologies. Thus there was not simply a cultural and epistemic fit between Firgrove and coaching knowledge but implementing this management knowledge exemplified Firgrove's culture and epistemic stance.

A key knowledge broker in this case was a Research Director, based in Firgrove's Organisational Development Unit, who had completed a PhD drawing on Schein's ideas and was personally invested in and drove the mobilisation of this management knowledge. The Research Director was supported by the university Dean and hospital CEO, who sponsored, role-modelled and promoted coaching conversations, providing a 'distributed leadership team', which has been found to underpin organisational change in other health care research (Fitzgerald et al., 2013, Ferlie et al., 2013). Hence we also see political fit between the mobilisation of this management knowledge and the prevailing power, politics and interests of key actors.

The Firgrove case provides another example of management knowledge being successfully mobilised into practice, requiring little adaptation, because it fitted (exemplified) Firgrove's open, innovative, pluralistic and collaborative culture, epistemic stance and the political agenda and interests of powerful actors. While there was perhaps technical fit between coaching cultures and Firgrove, we found less evidence of actors evaluating this knowledge/evidence to establish technical fit. We also see that knowledge mobilisation was again driven by a key knowledge broker, personally invested in the knowledge and its implementation as part of their own identity work.

Willowton PCT

'Willowton' PCT was a primary care organisation responsible for commissioning health care services for its local population. Willowton was undergoing structural change from a PCT to a Clinical Commissioning Group (CCG) [1] during this case study. Here knowledge mobilisation varied as the organisational context and predominant epistemic stance changed.

[1] PCTs were abolished following the 'Equity and Excellence' White Paper (Department of Health, 2010) replaced by Clinical Commissioning Groups.

We examined the mobilisation of a 'whole systems' learning initiative within the PCT, drawing on ideas outlined in a book written by a GP Clinical Director working for the PCT, based upon the GP's doctoral research. The book framed health care organisations as complex adaptive systems and accordingly advocated facilitating service improvement through organisational learning and "grass roots" involvement in change. The GP Clinical Director was heavily personally invested in whole systems thinking and the Initiative and acted as the key knowledge broker in the case, initially with the support and sponsorship of the PCT CEO.

Wider clinical and medical epistemic cultures common in primary health care affected Willowton PCT's organisational culture and epistemic stance, but the PCT was open to multiple forms of knowledge. The whole systems learning initiative was seen to provide a solution to a problem the PCT was facing; getting disparate and independent GPs working together to improve local primary health care services. Thus, initially, there was cultural, epistemic, political and (unsubstantiated claims of) technical fit between the knowledge the initiative was based on and its organisational context and objectives.

However, in the post-2008 financial crisis era, Willowton switched focus to making management cost reductions and accordingly developed a 'hard' epistemic stance, valuing audit, outcome measures and performance management. The PCT CEO, who initially supported the initiative and acted as a steward of the PCT's previous culture and epistemic stance, then left the PCT. As the initiative lost fit with the PCT's new harder epistemic stance and sponsorship from its CEO, the GP Clinical Director came under pressure to demonstrate that time and resources committed to the initiative were producing a measurable financial return. In theoretical terms, the GP was asked, for the first time, to show evidence of a technical fit between the initiative and the PCT's objectives. Adapting whole systems learning to fit the metric and short-term performance outcome-dominated organisational stance proved too difficult and the initiative was "summarily executed". Thus we see here a loss of political, cultural, epistemic and rational fit between the initiative and the PCT.

Here, again, we see the importance of both fit between management knowledge and the prevailing culture, politics, and epistemic stance within the organisation, and input from a key knowledge broker in fitting knowledge into the organisation. However, in this case we also see how cultural and political contexts and epistemic stances can radically change, with the consequence that management knowledge and knowledge brokers can fall out of fit if they

are unable to adapt. This case also provides an interesting example of how lack of technical fit may be used to justify the non-mobilisation of knowledge that does not fit organisations in a wider range of ways.

Elmhouse Consulting

Another mixed example of knowledge mobilisation was in our case study of a NHS project run by 'Elmhouse Consulting', a global management consultancy. Management consultancies are increasingly drawn upon by health care organisations to advise on strategy and to help implement organisational change (Saint-Martin, 2004), so we were keen to examine the impact of management consultants and consulting knowledge on health care.

Our knowledge tracer was the implementation of an Elmhouse change model during a consultancy project in a NHS Strategic Health Authority (SHA) and associated PCTs. Elmhouse partners developed the Elmhouse model; one was working on the project we studied. The model drew on evidence from Elmhouse's previous consulting work, as well as ideas from the Partner's Business School-based PhD. This particular Partner was therefore a key knowledge broker in the case study, although other Elmhouse consultants working on the project also played important knowledge brokering roles

Senior SHA managers commissioned, supported and sponsored Elmhouse to implement their model in the regional NHS with the aim of redesigning health care services and making major efficiency savings. Elmhouse's model was seen to have "fitted" the SHA's "strong delivery focus", "structured" approach and "tight timescales". So there was epistemic and political fit between the Elmhouse model and the SHA's epistemic stance, culture and interests. One SHA senior manager noted they "never saw [the Elmhouse model] as empirical evidence, it just came across as folk who knew what they were doing." So again, we saw no evidence of attempts to establish technical fit between the Elmhouse model and the SHA's objectives.

While Elmhouse's change model was readily mobilised within the SHA, there were political, cultural, epistemic and rational clashes between the model and local PCTs. PCT NHS managers and clinicians were less concerned about Elmhouse's 'high level' analysis of cost savings than the day-to-day impact of service redesign on patients and the need to develop clinical buy-in to change. The end of our case study coincided with an Government

announcement (Department-of-Health., 2010) that SHAs and PCTs would be abolished; with SHA and PCT managers facing losing their jobs. This complicates our ability to assess the project. However, PCT managers and clinicians appeared to struggle with understanding or accepting Elmhouse's analysis for service redesign and efficiency savings. Accordingly, while Elmhouse consultants were brokering and fitting their knowledge to the local NHS context there was some progress mobilising the Elmhouse model; but after the project ended, and consultants left, knowledge mobilisation and related service redesign stalled.

In this case we see a mix of fit and clashes between the rational, political, cultural and epistemic stances of the groups and organisations, with variation over time. Actors focused on challenging the technical fit between knowledge and organisational context, while political, cultural and epistemic clashes were not overtly discussed. Significant technical, cultural, political, and epistemic clashes between the Elmhouse model and its context meant that this knowledge would need to be heavily adapted to be mobilised. However, we question whether Elmhouse's model could be adapted to fit PCTs because its consultants were more focused on "persuading" clients to mobilise their model and "fixing the context" so that it was receptive to Elmhouse's epistemic stance and model. Finally, knowledge mobilisation progressed more quickly while the Partner and Elmhouse consultants were brokering knowledge, but dramatically slowed when they left the client site. This is an important finding, which suggests that knowledge brokers may need to be *personally* invested in knowledge and its implementation and *permanently* embedded in the contexts in which it is mobilised.

Finally in this section, we give brief resumes of our other two cases, in neither of which was knowledge effectively mobilised.

Beechwell: A health policy think tank

'Beechwell' was a health policy 'think tank' aiming to improve UK health care through health policy analysis, research and leadership development. Beechwell was organised into separate divisions, with distinct epistemic stances affected by wider epistemic cultures. For example, the policy division drew on, valued and produced 'rational' academic knowledge, while the OD division was oriented to 'softer' developmental knowledge, such as leadership development. We examined knowledge flows between Beechwell's divisions, using the tracer

of an economic analysis of the post-2008 financial crisis health care context produced within the policy division.

In principle, the analysis was adopted across Beechwell as a 'strategic' cross-departmental theme. In practice, the economic analysis failed to attract "natural synergy", so was not mobilised. This was largely due to limited epistemic fit and cultural differences between the policy division's analysis and the OD division. Furthermore, key actors in Beechwell, a high profile Chief Executive and Director, were oriented towards the external public rather than focused on internal issues; the absence of internal knowledge brokering also undermined mobilisation of this knowledge.

Mapleshire CLAHRC

'Mapleshire' was a Collaboration for Leadership Applied Health Research and Care (CLAHRC) situated within a university research department and partnered with a NHS Trust, SHA and a local authority. CLAHRCs were established across the UK to conduct and translate applied health research into practice to benefit patients. Mapleshire CLAHRC involved a diverse range of epistemic communities, including social science and business school-based academics, clinical academics and NHS practitioners, each with distinct interests and epistemic stances, affected by the wider epistemic cultures.

The tracer for this case study was the 'X-change programme' (a pseudonym) encouraging involvement in the CLAHRC, sharing of data and analytical perspectives, extracting common themes from research projects and fostering communication, sharing and spread of information. The X-change programme was based on theory about 'communities of practice' (Wenger, 1998)and cultural change in the NHS (Bate, 1994). A key knowledge broker was the CLARHC's initial director, a successful academic social scientist, with a track record in health services research.

Differences between local communities' epistemic stances and interests significantly slowed knowledge mobilisation. In particular, clinical communities did not engage with the X-change programme, which drew on ideas more congruent with the epistemic stance of business school and social science academics. Low epistemic fit between the X-change programme and clinical communities undermined knowledge mobilisation in this case. Finally, Mapleshire lacked a knowledge broker with a clinical background (and thus

sufficient understanding of the clinical epistemic culture and interests), so accordingly was unable to adapt the X-change programme to fit the clinical epistemic stance and engage clinical communities.

In the following table we highlight and compare the key findings across the six cases:

Insert table about here

In the table we display and compare six features of our six cases: (1) the management knowledge being mobilised; (2) the main communities in the case contexts; (3) whether there was a political, cultural, epistemic or technical fit or clash between the knowledge being mobilised and these communities; (4) the key knowledge broker in the case; (5) the knowledge broker's source of power/authority; and (6) the work the knowledge broker engage in fitting knowledge to context.

DISCUSSION

'Fit', 'epistemic fit' and management knowledge mobilisation in health care

In all six case studies, we found that 'fit' (Ansari et al., 2010) between the management knowledge being mobilised and the prevailing, cultures, (political) interests and dominant 'epistemic stances' (Chakravartty, 2011, Fayard et al., 2015) in organisational contexts significantly affected knowledge mobilisation. As we have noted, health care is a particularly complex context, containing plural professional and epistemic communities, defined and based on particular bodies of knowledge, with distinct 'mindlines' (Gabbay and Le May, 2004) and epistemic stances affecting what is seen to be valid and valuable knowledge (Ferlie et al., 2005). For example, in medicine the 'gold standard' of knowledge and evidence is the randomised control trial (RCT) (Timmermans and Berg, 2003) whereas in management, RCT-based knowledge is rare (Reay et al., 2009) and even inappropriate (Ardnt and Bigelow, 2009). While acknowledging the importance of institutional/cultural, political, and to a lesser extent technical fit (Ansari et al., 2010), we make a contribution by highlighting the importance of what we refer to as 'epistemic fit' between knowledge and its organisational context within the knowledge mobilisation process in health care.

In our two most positive cases of knowledge mobilisation, Oakmore and Firgrove, the organisations' epistemic stances were 'open' to new (including managerial) knowledge. In

Oakmore, medical and managerial knowledge were 'blended' to create a more performance oriented and 'business like' health care organisation, and the balanced scorecard fitted Oakmore's epistemic stance. Firgrove actively promoted plural epistemologies, so 'coaching conversations' not only fitted but also exemplified Firgrove's epistemic stance.

Elmhouse and Willowton provided cases of mixed fit and clash and varying management knowledge mobilisation over time, affected by the organisations' and their associated communities' epistemic stances and changing power dynamics. In Willowton, whole systems learning initially fitted the PCTs epistemic stance, cultural and political dynamics. However this management knowledge then lost fit with in the post-2008 financially constrained era, and could not be adapted to fit this new organisational context. While lack of technical fit between whole systems learning and the PCT's performance objectives was ultimately used to justify pulling funding for the Initiative, we argue that this was more a consequence and function of lack of political and epistemic fit.

Elmhouse's change model fitted the SHA's epistemic stance, SHA managers' mindlines and political agenda but was not readily mobilised to the PCT. This was due to cultural, political and epistemic clashes between Elmhouse's model and the managerial and clinical communities within the PCT. As in Willowton, we again see arguments about lack of technical fit, being used (here by PCT managers and clinicians) to challenge the mobilisation of management knowledge, while lack of political cultural and epistemic fit were less openly discussed. Yet we suggest that the non-mobilisation of this form of management knowledge was determined less by its lack of objective fit with organisational issues/problems and more by clashes with a priori political interests, institutional/cultural norms, and epistemic stances.

In Mapleshire and Beechwell, incommensurability between management knowledge and the epistemic stances of communities into which it was being mobilised fatally weakened the process. This supports the findings of previous research (Ferlie et al., 2005, Albert et al., 2008, McGivern and Dopson, 2010, Swan et al., 2010) showing how boundaries between epistemic communities can undermine innovation and knowledge mobilisation.

Knowledge brokers' roles in management knowledge mobilisation in health care

A second key finding from our cases relates to the important role of knowledge brokers in developing fit between management knowledge and organisational contexts, which echoes

findings from research on the mobilisation of *clinical* knowledge (Dopson and Fitzgerald, 2006, Lomas, 2007). Oakmore's CEO, Willowton's GP Clinical Director, Firgrove's Research Director and the Elmhouse Partner all played vital roles in mobilising management knowledge they believed fitted problems the organisations in our case studies were facing. We saw less emphasis on the 'tailored adaptation' of management knowledge to fit organisational contexts as described by(Ansari et al., 2010)). Instead, these knowledge brokers fitted knowledge by, first, selecting management knowledge culturally/institutionally, politically and epistemically appropriate to organisational contexts and, second, shaping the epistemic stances of the organisation and associated local communities to be receptive to this knowledge.

The most successful knowledge brokers in our case studies were *personally* invested in management knowledge they were mobilising, drawing on it to construct their sense of self and mobilising it to transform organisational contexts as a form of 'identity work' (also see Ferlie et al., 2013, McGivern et al., 2015, Fischer et al., 2015). For example, the implementation of the balanced scorecard in Oakmore reflected its CEO's 'hybrid' medical-managerial identity and the more 'business-like' clinical organisation he was developing. Firgrove's Research Director, Willowton's GP Clinical Director and the Elmhouse Partner had all been interested in the management knowledge they were mobilising since doctoral studies. However, where knowledge brokers were only temporarily invested in mobilisation in organisational sites the process was less effective. For example, after the Elmhouse project ended, and the management consultants left the NHS organisational site, mobilisation of their change model slowed. In Mapleshire and Beechwell, where knowledge mobilisation was least successful, knowledge brokers appeared neither personally nor permanently invested in the knowledge being mobilised. So management knowledge mobilisation in our cases was personal, occurred indirectly through knowledge brokers, and often took time.

Management knowledge may be mobilised more on the basis of liking, trusting and believing in knowledge brokers, than of understanding the knowledge being mobilised or the evidence behind it; so knowledge brokers needed personal and professional credibility. For example, some Willowton managers we interviewed struggled to articulate what 'whole systems thinking' was but supported the whole systems learning initiative because they liked and respected the GP Clinical Director who was leading it. By contrast, the Mapleshire CLAHRC Director, as a social scientist, lacked the clinical authority and credibility to influence powerful doctors to adopt the x-change programme.

Finally, knowledge brokering and mobilisation requires power but also increases knowledge brokers' power where successful. For example, Oakmore's CEO drew upon hierarchical authority and professional credibility to make the organisation's epistemic stance more receptive to management knowledge and to impose the balanced scorecard on it. In doing so, Oakmore became aligned with the CEO's own agenda and the CEO's power base was increased. Firgrove's OD Director, the Elmhouse Partner and Willowton's GP Clinical Director (initially) were supported in their efforts to mobilise knowledge by CEOs in their respective organisations. However, the Willowton and Elmhouse cases show how changing structural power, loss of senior level support and fit with dominant organisational epistemic stances affect knowledge mobilisation. So epistemic fit reflects, affects, requires and confers organisational power.

CONCLUSION

In this chapter we have discussed the 'fit' between management knowledge and organisational context (Ansari et al., 2010) in health care. Health care is a particularly complex context, containing plural professional and epistemic communities, defined and based on particular bodies of knowledge, with distinct epistemic stances on what is valid and valuable knowledge. Drawing on six diverse case studies of the mobilisation of *management* knowledge in health care, we highlight the importance of 'epistemic fit' between the management knowledge being mobilised and the dominant 'epistemic stances' (Chakravartty, 2011, Fayard et al., 2015) in the sites we examined.

Knowledge brokers play a key role in mobilising knowledge into health care. This has been discussed before (Dopson and Fitzgerald, 2006, Lomas, 2007), but our cases point to some novel aspects of knowledge brokering. First, the most successful knowledge brokers were *personally* invested in the knowledge they brokered and its implementation *in the long term*, so knowledge brokering can be seen as a form of identity work. Second, knowledge brokering can be understood as involving 'fitting work', developing technical, cultural/institutional, political and epistemic fit between knowledge and context. However, in our cases knowledge brokering was less about adapting management knowledge to context than selecting appropriate management knowledge and developing organisations' epistemic stances to be 'open' to it. Finally, knowledge brokering appears to rely upon the individual having power but can also provide and enhance their power. Thus, while fitting may require

sufficiently sharing the epistemic stance and interests of those with most power, it can also increase knowledge brokers' power by aligning their own fit with that of their organisation.

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